

Project -> Full Stack Java Developer Capstone Project

1. ICIN Bank

This Project is Developed by Anushka Sharma. This project is hosted on the git repository : <https://github.com/AnushkaSharma9/Capstone-Project-ICIN-Online-Banking.git>

1.1 PROJECT DESCRIPTION

This application is designed and developed as an Online Banking Web Application where the back-end is developed using Sprint Boot Framework and front-end is developed by using Angular. This system allows ICIN Bank admin to provide net banking facilities for end users, such as Registration, Login, Account transactions, Transfers, Saving details, Requesting cheque books, etc. The admin user is able retrieve transactions as well as block user. The user can register or login into the application , they can deposit or withdraw money from their account, view transactions, and balance in the primary and savings account. Transfer funds between different and add recipients, request cheque books for different accounts.

1.1.2 TECH STACK

- MySQL
- Eclipse
- Spring boot Framework
- Core Java Concepts - Object Oriented Programming (OOPS) Concepts such as Classes and Objects.
- JDBC template
- HTML - Hyper Text Markup Language
- CSS - Cascading Style Sheets

- Angular 2
- Jenkins
- Docker
- AWS EC2 instance

2. FLOW CHART OF THE APPLICATION

The below given picture depicts the flow of the Project :

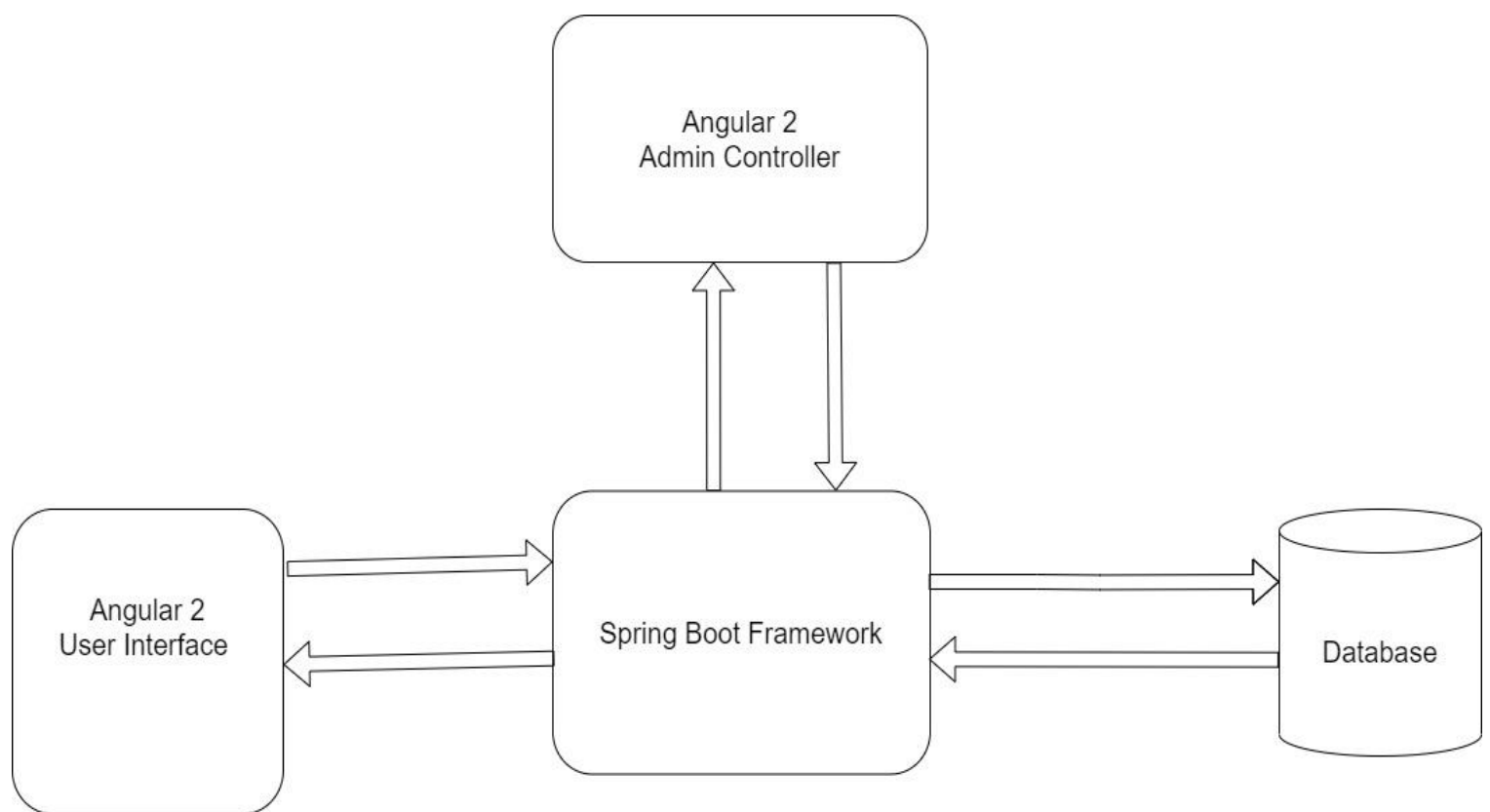


FIG 1 - FLOW CHART OF THE PROJECT

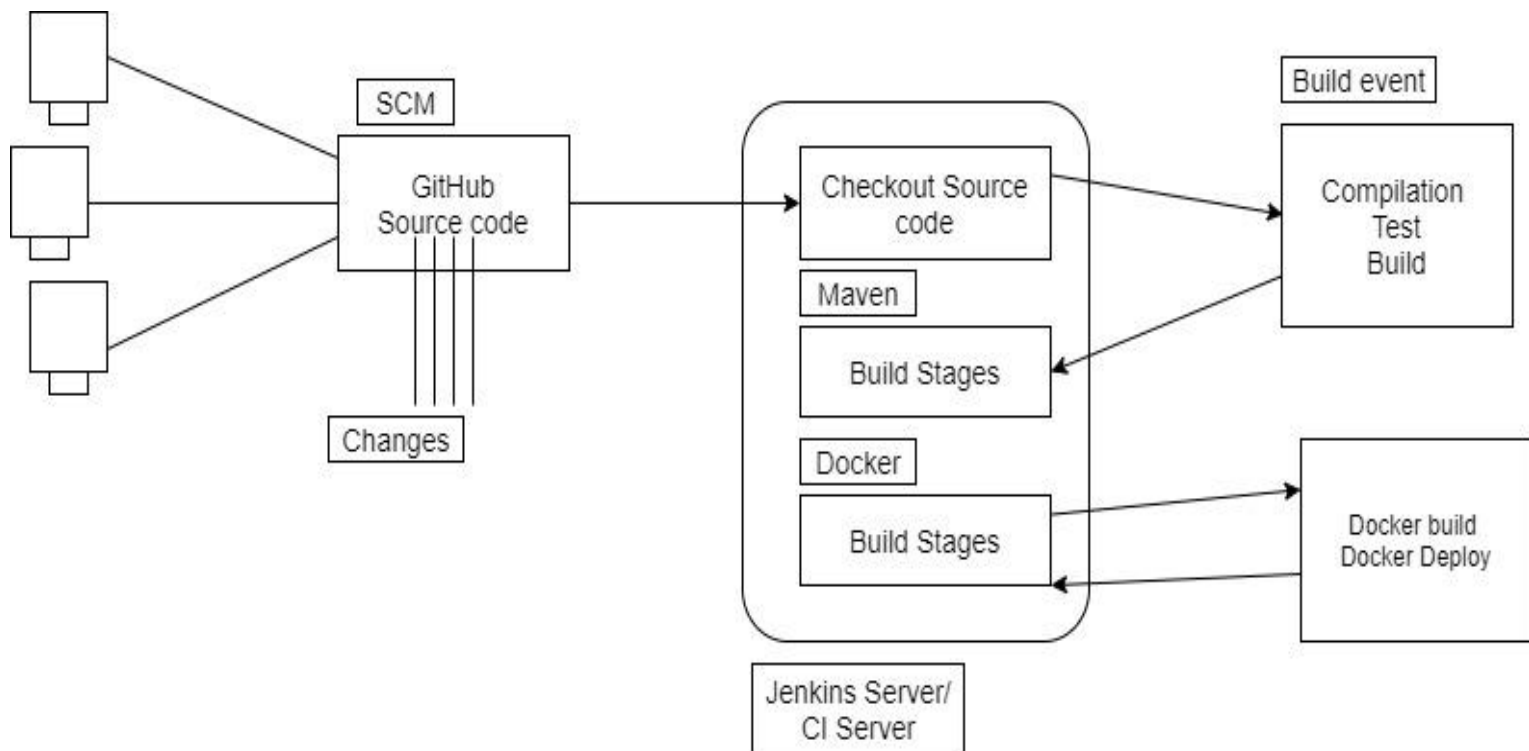


FIG 1 - FLOW CHART OF THE DEPLOYMENT

3. PROJECT USER STORIES : (Agile and Scrum)

- As a user I want an ICIN bank Online Banking web Application for end users.
- As a user I want an ICIN bank Online Banking web Application in which I can retrieve transaction for end users.
- As a user I want an ICIN bank Online Banking web Application in which I can block an end user.
- As a user I want an ICIN bank Online Banking web Application in which end user can register into the application.
- As a user I want an ICIN bank Online Banking web Application in which end user can login into the application.

- As a user I want an ICIN bank Online Banking web Application in which end user can deposit and withdraw from the account in the application.
- As a user I want an ICIN bank Online Banking web Application in which end user can view transaction and balance in the primary and savings account in the application.
- As a user I want an ICIN bank Online Banking web Application in which end user can transfer funds between different accounts and add recipients in the application.
- As a user I want an ICIN bank Online Banking web Application in which end user can request cheque books for different accounts in the application.
- As a developer I want to develop an ICIN bank Online Banking web Application for end users as well as Admin user.
- As a developer I want to develop an ICIN bank Online Banking web Application in which Admin user can retrieve transaction for end users.
- As a developer I want to develop an ICIN bank Online Banking web Application in which Admin user can block an end users.
- As a developer I want to develop an ICIN bank Online Banking web Application in which end user can register into the application.
- As a developer I want to develop an ICIN bank Online Banking web Application in which end user can login into the application.
- As a developer I want to develop an ICIN bank Online Banking web Application in which end user can deposit and withdraw from the account in the application.
- As a developer I want to develop an ICIN bank Online Banking web Application in which end user can view transaction and balance in the primary and savings account in the application.
- As a developer I want to develop an ICIN bank Online Banking web Application in which end user can transfer funds between different accounts and add recipients in the application.

- As a developer I want to develop an ICIN bank Online Banking web Application in which end user can request cheque books for different accounts in the application.

4. SPRINTS

Sprint 1

- Understanding the problem statement of the project .
- Creating the flow chart of the application.

Sprint 2

- Creating Spring Boot Project.
- Adding necessary dependencies.
- Creating Controller, Model, DAO, Exception, Service, and ServiceImpl packages needed.
- Writing Hibernate to connect with the database MySQL.

Testing at each step for different user inputs.

Sprint 3

- Downloading Angular2 for making the front end of the application.
- Adding various folders to achieve the front-end for making the application user-friendly
- In these folders adding .html, .css, .ts , as well as .spec.ts.
- Connecting to the backend.
- Running the application on a port.

Sprint 4

- Creating AWS EC2 instance.
- Downloading MobaXterm.
- Downloading Jenkins and Docker in MobaXterm.
- Deploying the application on Jenkins and docker server.
- Creating the Specification document for deploying the project.
- Testing at each step for different user inputs.

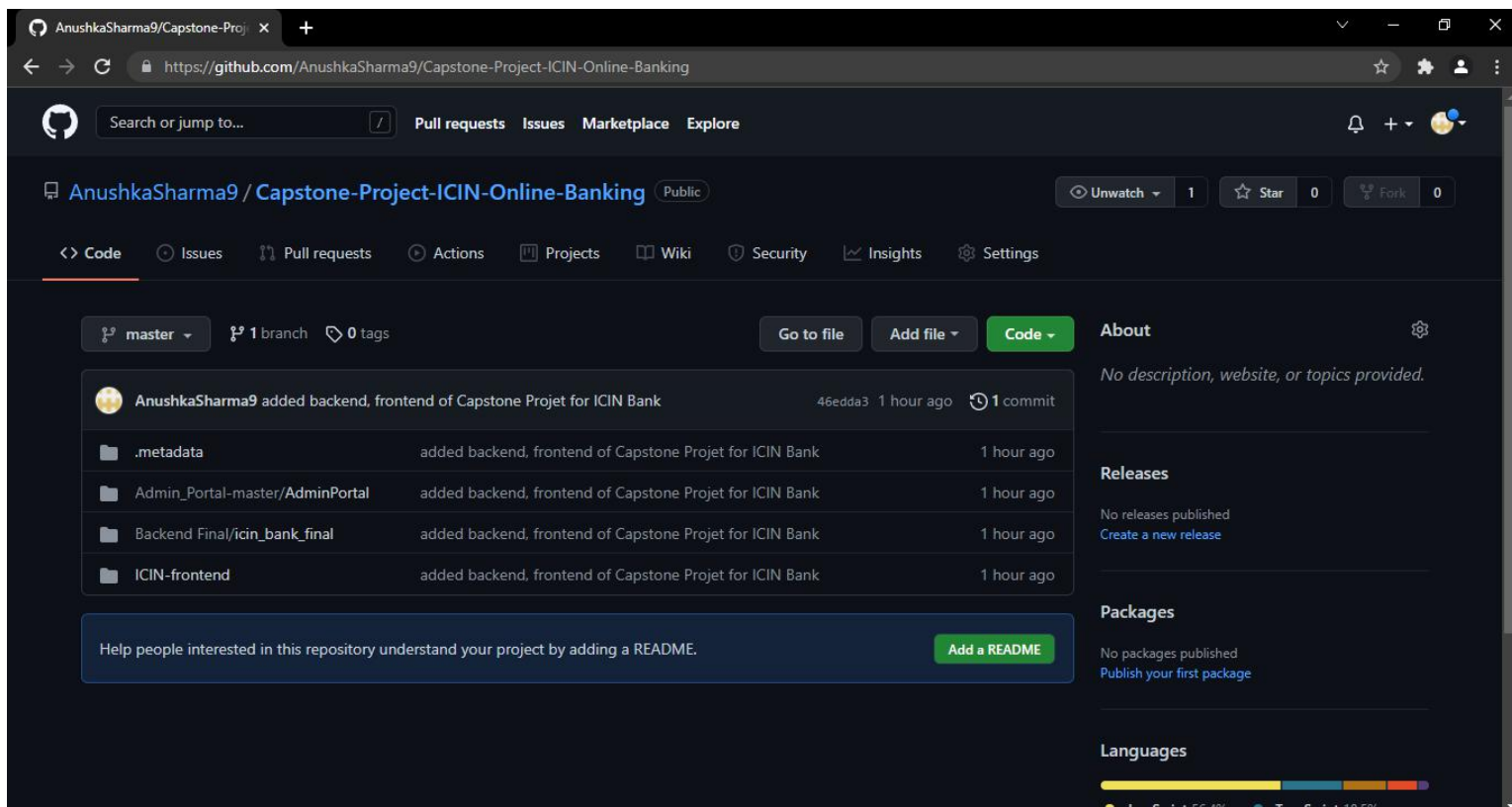
- Pushing the code to the GitHub

5. PROJECT GIT REPOSITORIES

1. Link to the GitHub Repository : <https://github.com/AnushkaSharma9/Capstone-Project-ICIN-Online-Banking.git>

2. clone git : <https://github.com/AnushkaSharma9/Capstone-Project-ICIN-Online-Banking.git>

3. Screen Shot of GitHub :



4. How to run Project :

4.1. clone project

clone git : git clone <https://github.com/AnushkaSharma9/Capstone-Project-ICIN-Online-Banking.git>

4.2. open Capstone-Project-ICIN-Online-Banking->Backend Final->icin_bank_final->src->main->java->com->icin

right click on icin_bank_final -> Run as -> Spring Boot App

✧ Name of Project->>**icin_bank_final**

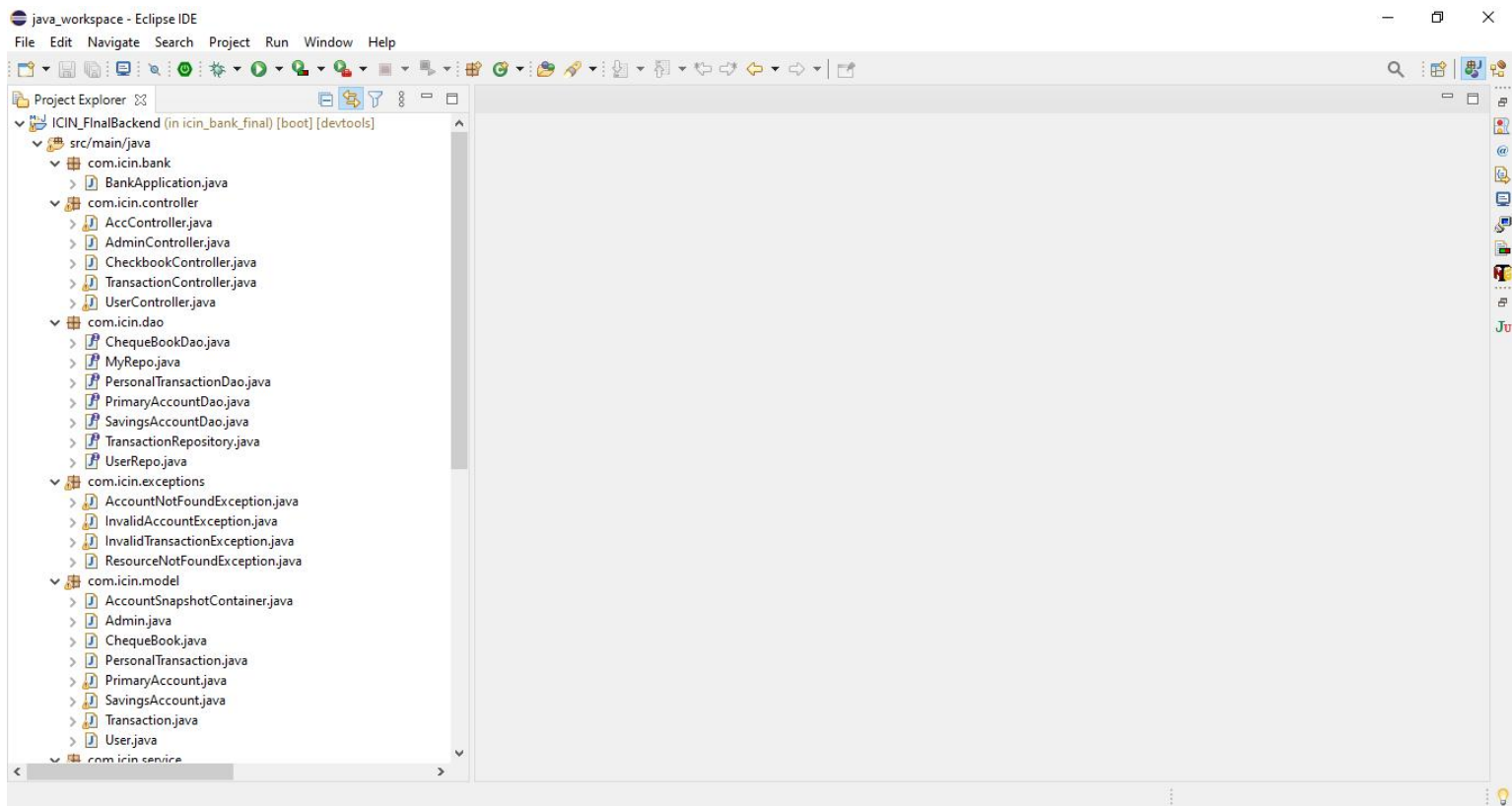
4.3 ICIN-frontend -

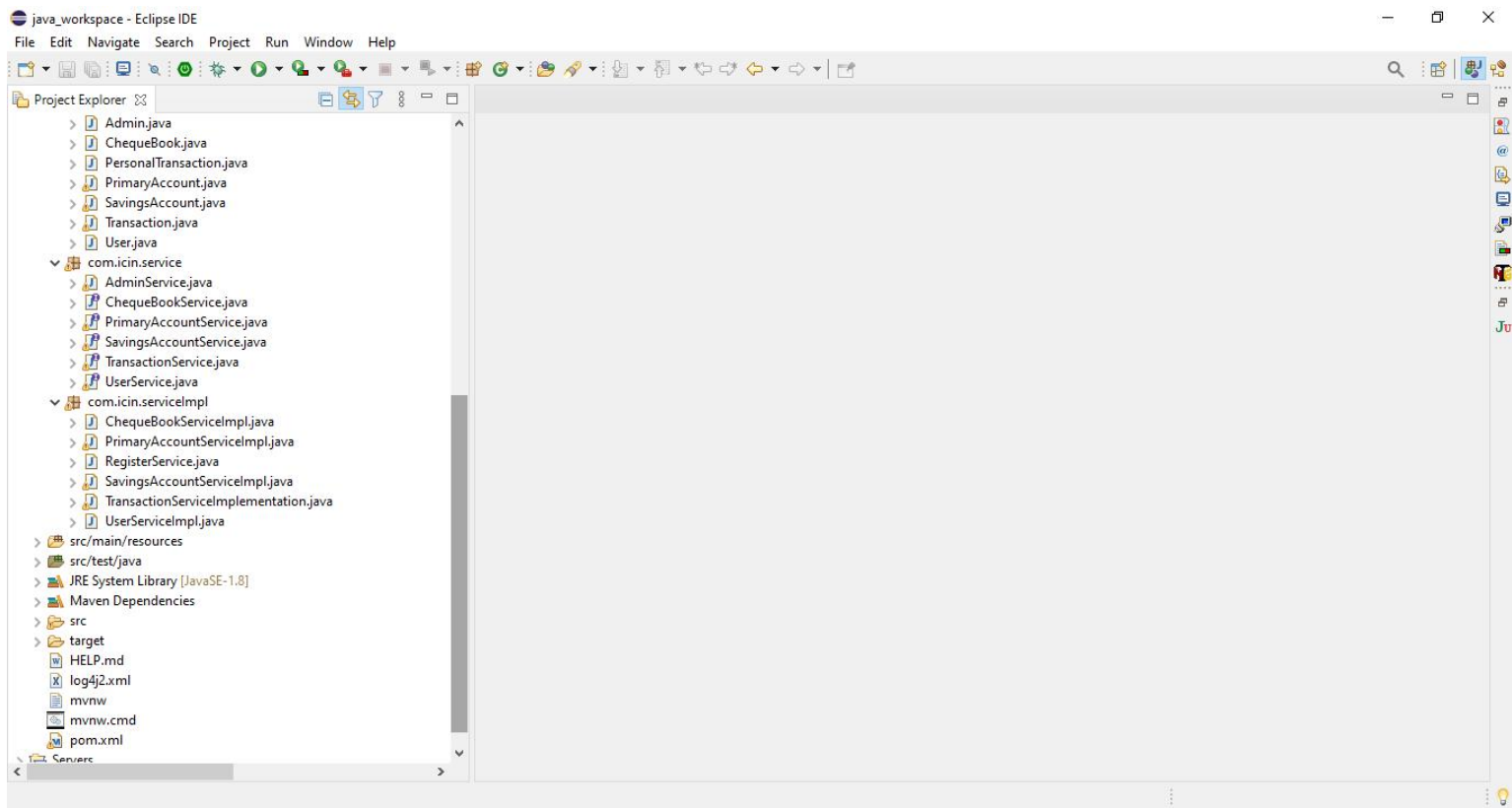
- Open VS Code in this folder
- Run command in VS Code in terminal as 'ng serve', to start the ICIN interface for user on port <http://localhost/4200>.

4.4 Admin_Portal-master/AdminPortal -

- Open VS Code in this folder
- Run command in VS Code in terminal as 'ng serve --port 4201', to start the Admin Controller for user on port <http://localhost/4201>.

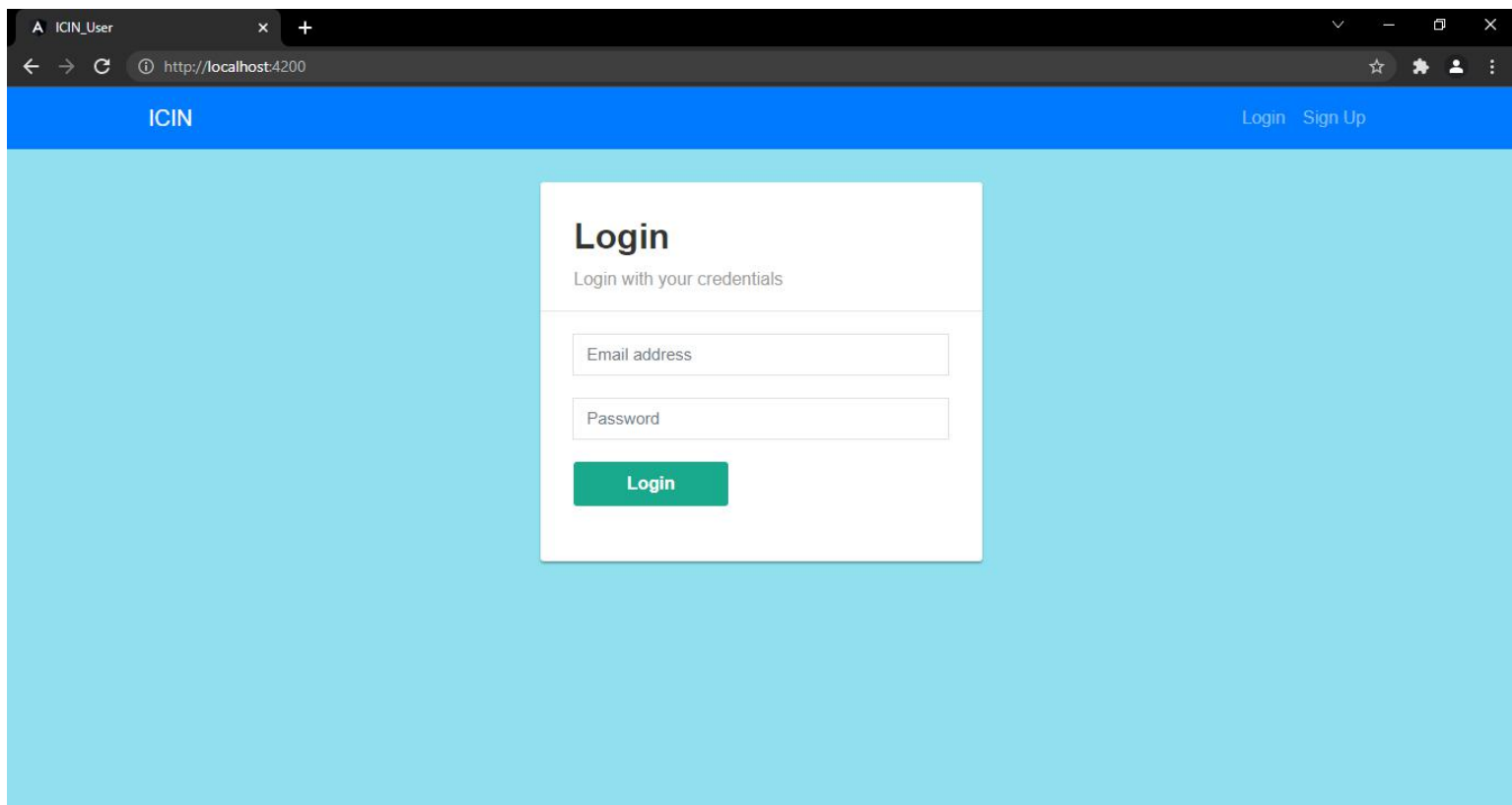
✧ DIRECTORY STRUCTURE / PACKAGE

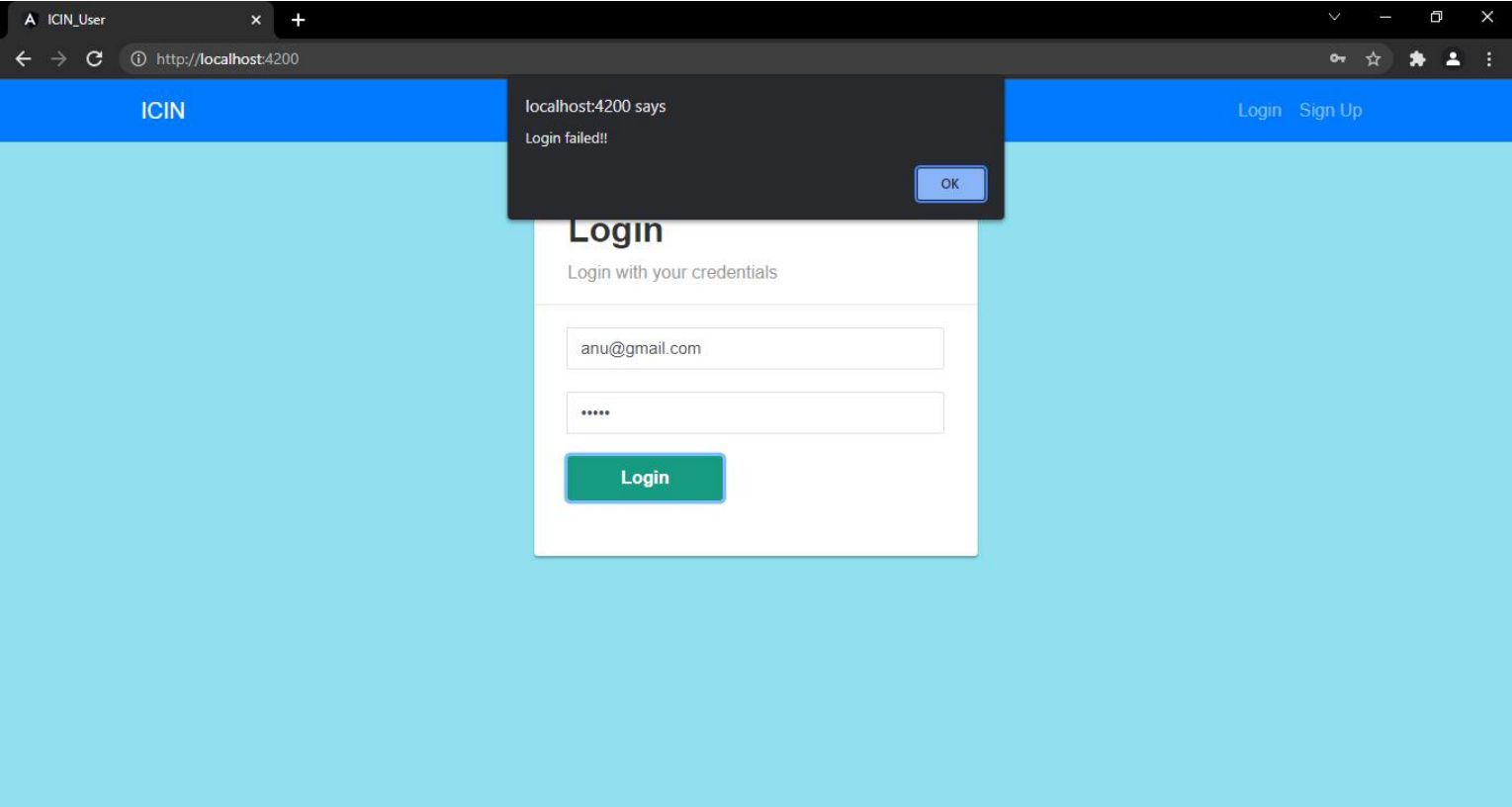
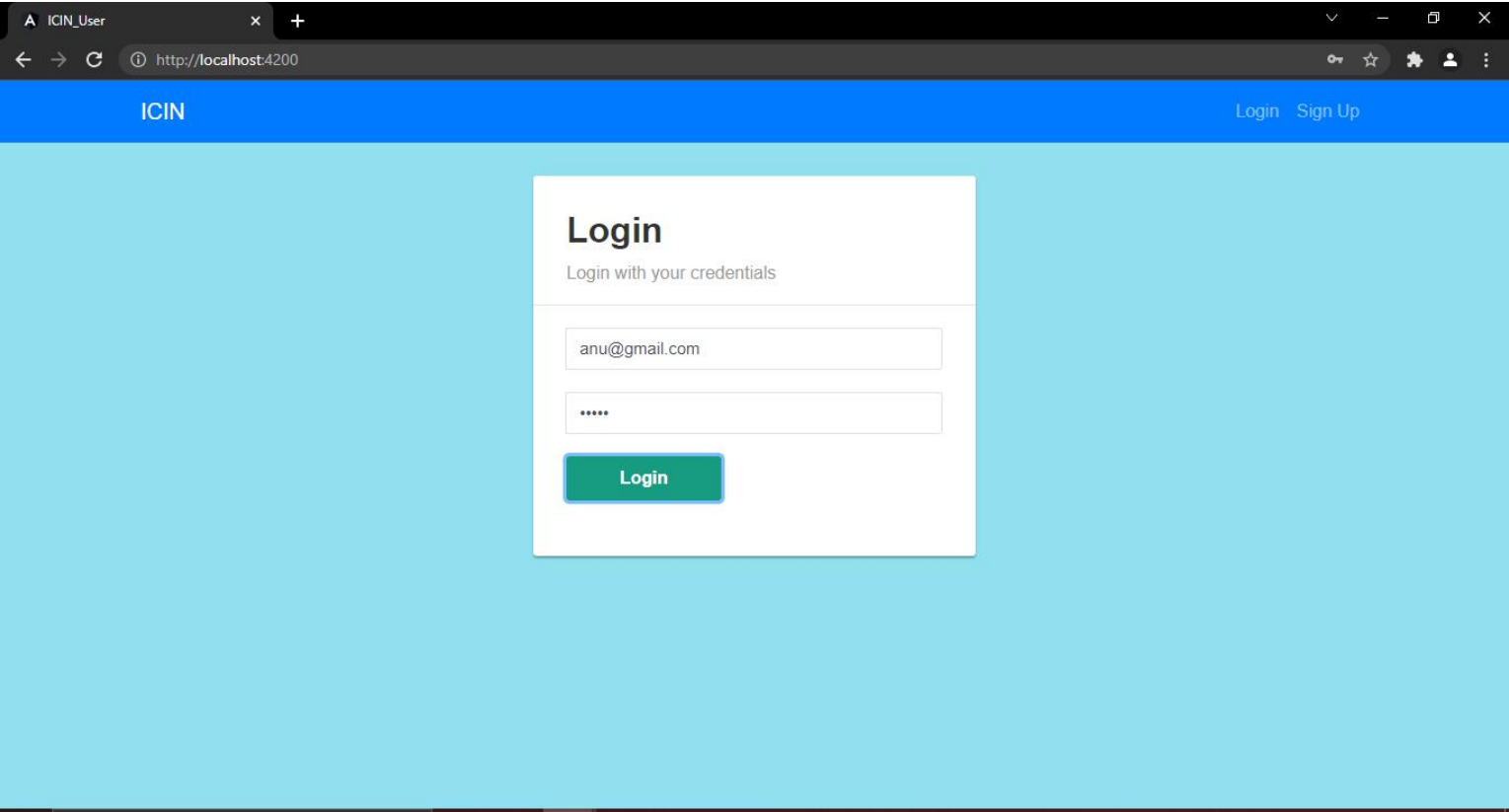


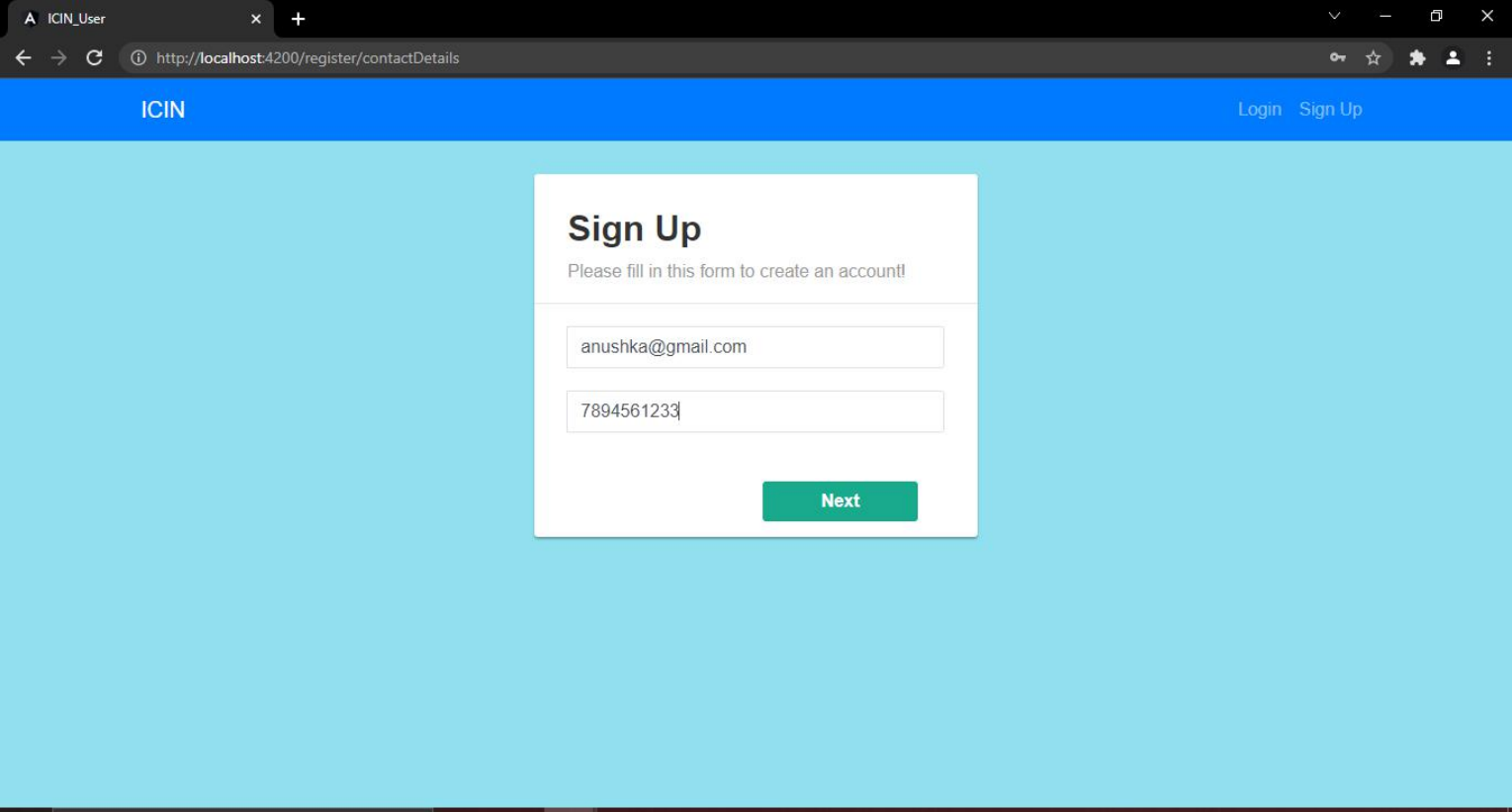
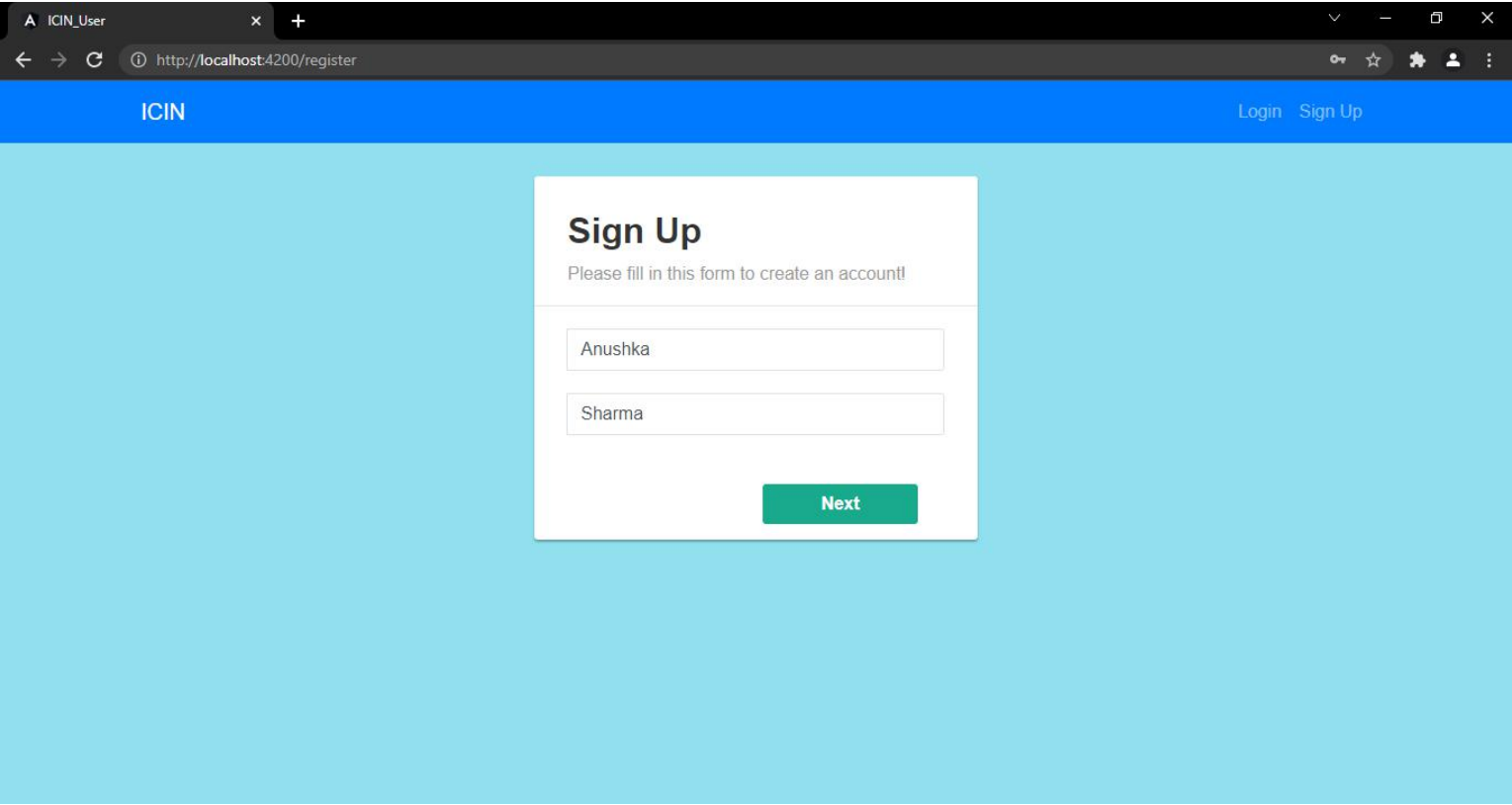


✧ SCREENSHOTS OF OUTPUT

✧ SCREENSHOTS OF USER / ICIN PORTAL







ICIN_User

+

← → ↻

http://localhost:4200/register/kycDetails

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ICIN

LoginSign Up

Sign Up

Please fill in this form to create an account!

1999-01-19

rer4434

Next

ICIN_User

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← → ↻

http://localhost:4200/register/addressDetails

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ICIN

LoginSign Up

Sign Up

Please fill in this form to create an account!

21 street f

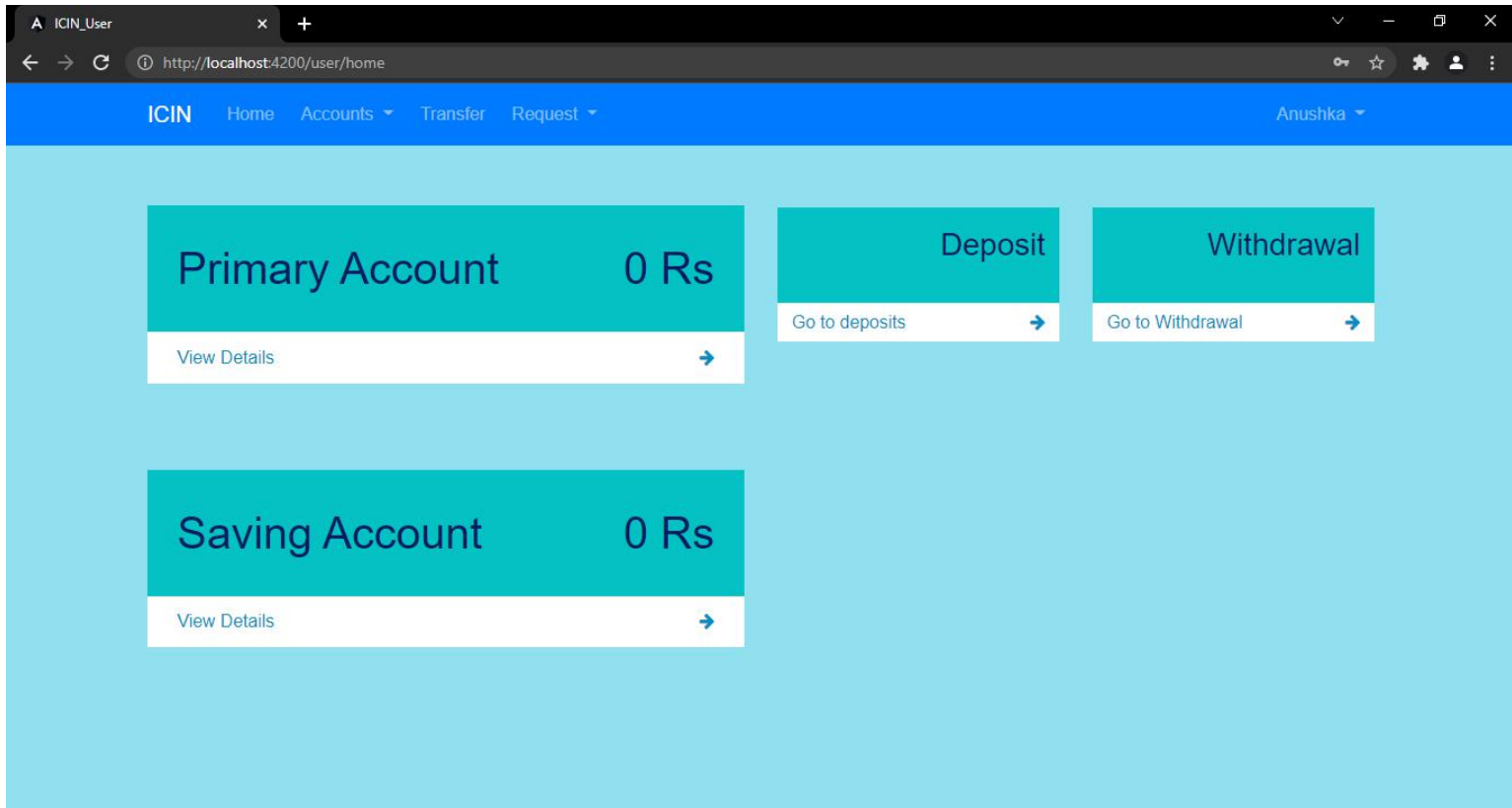
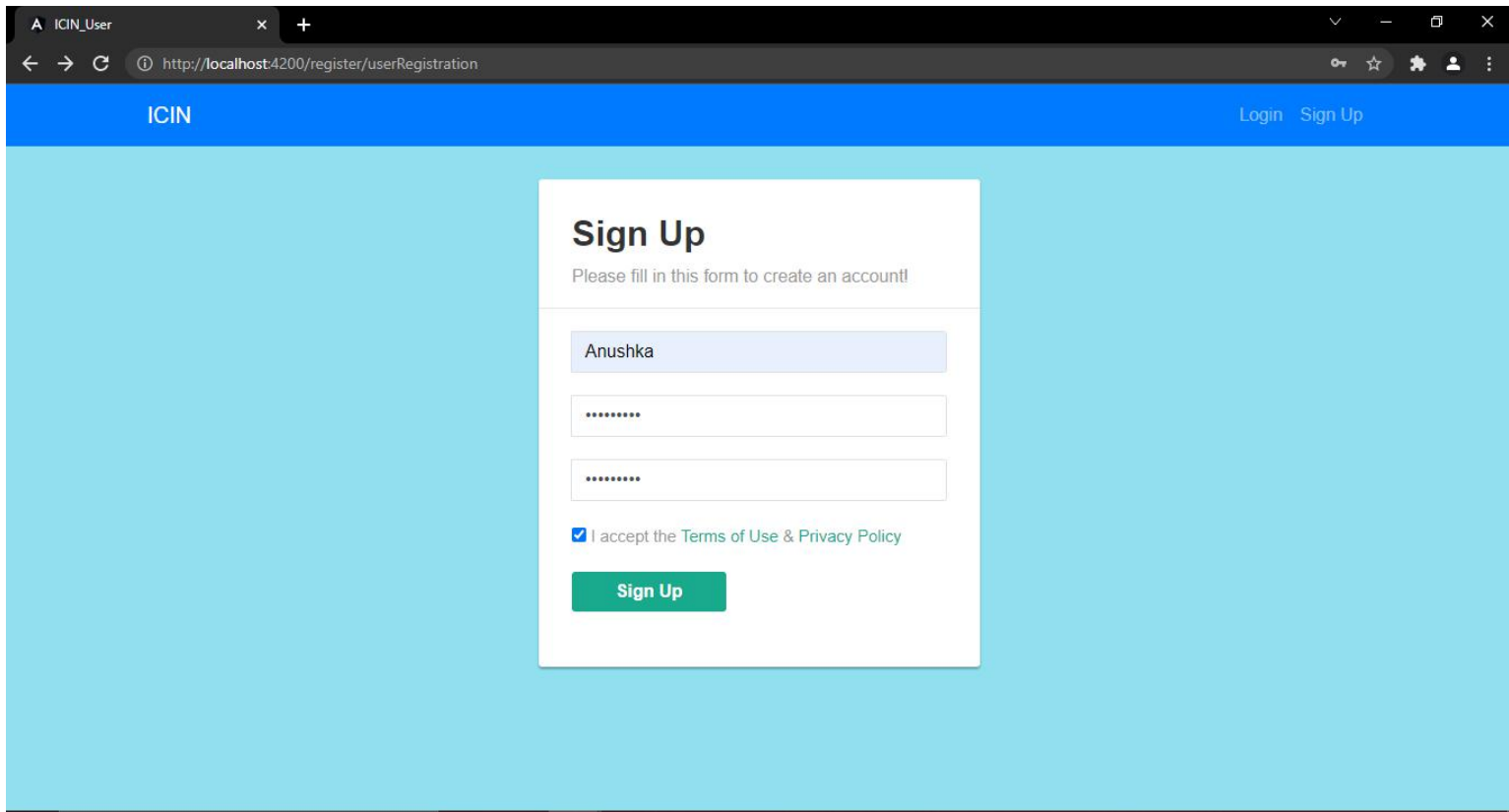
hoff

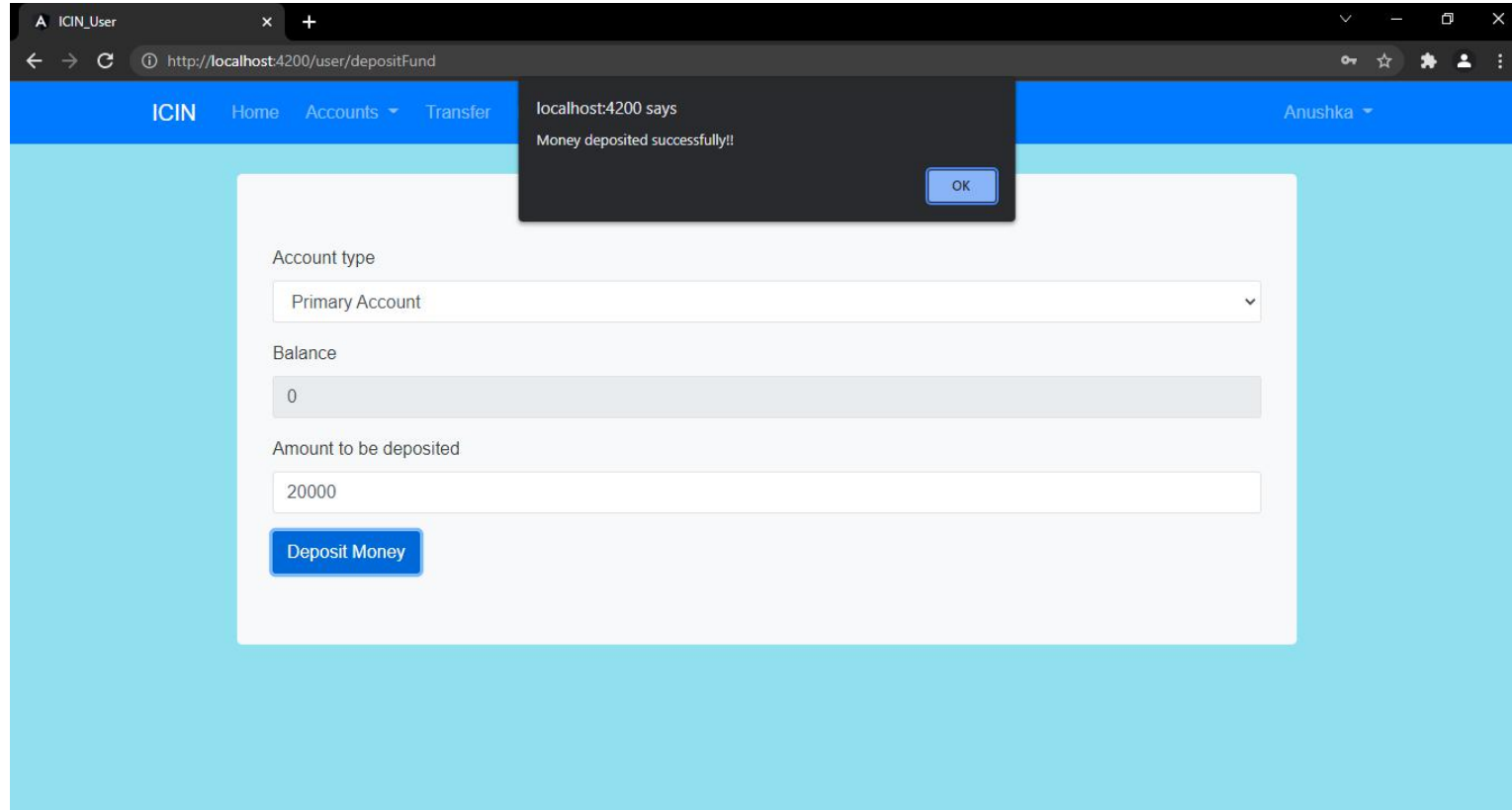
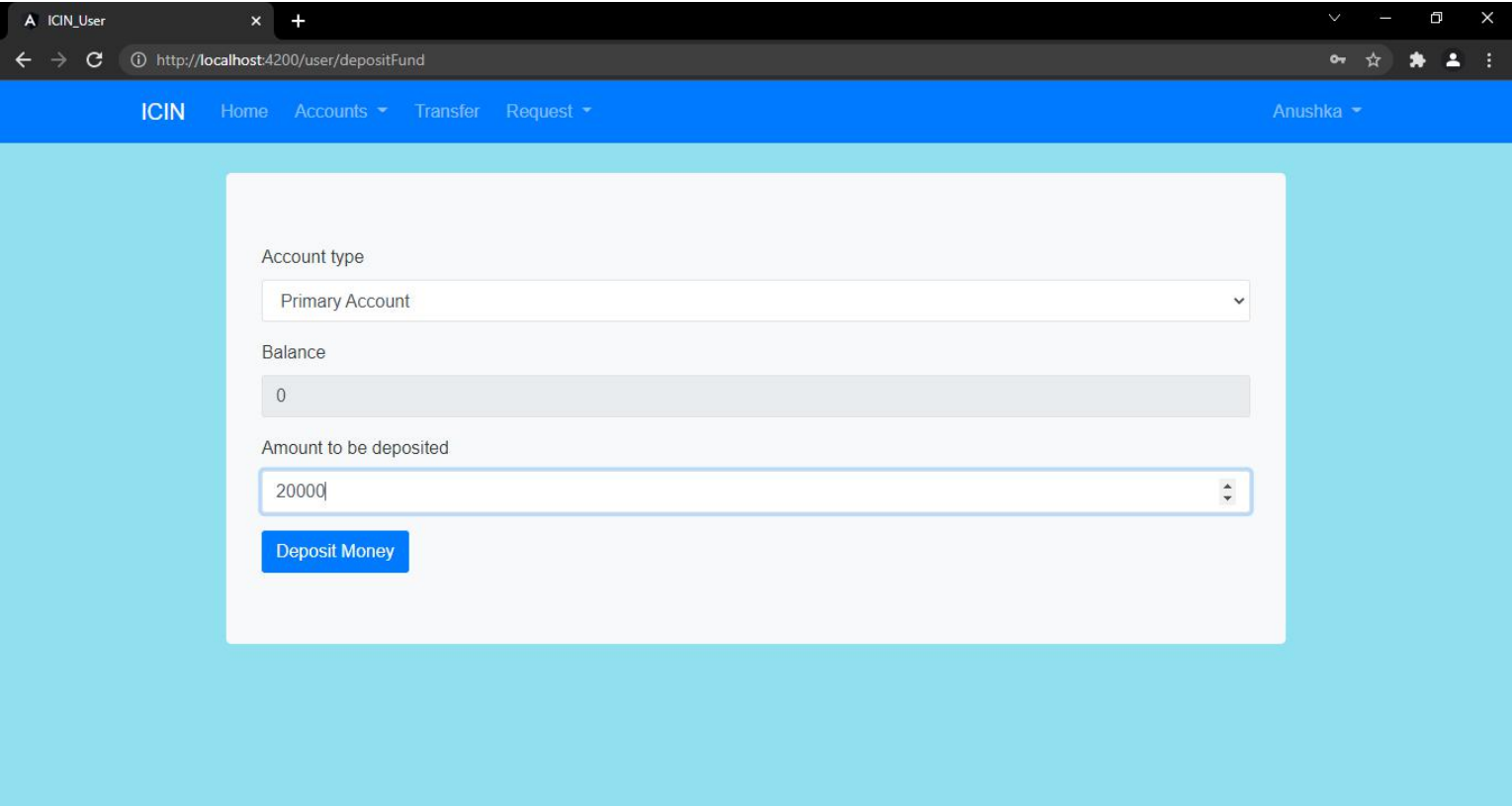
Agra

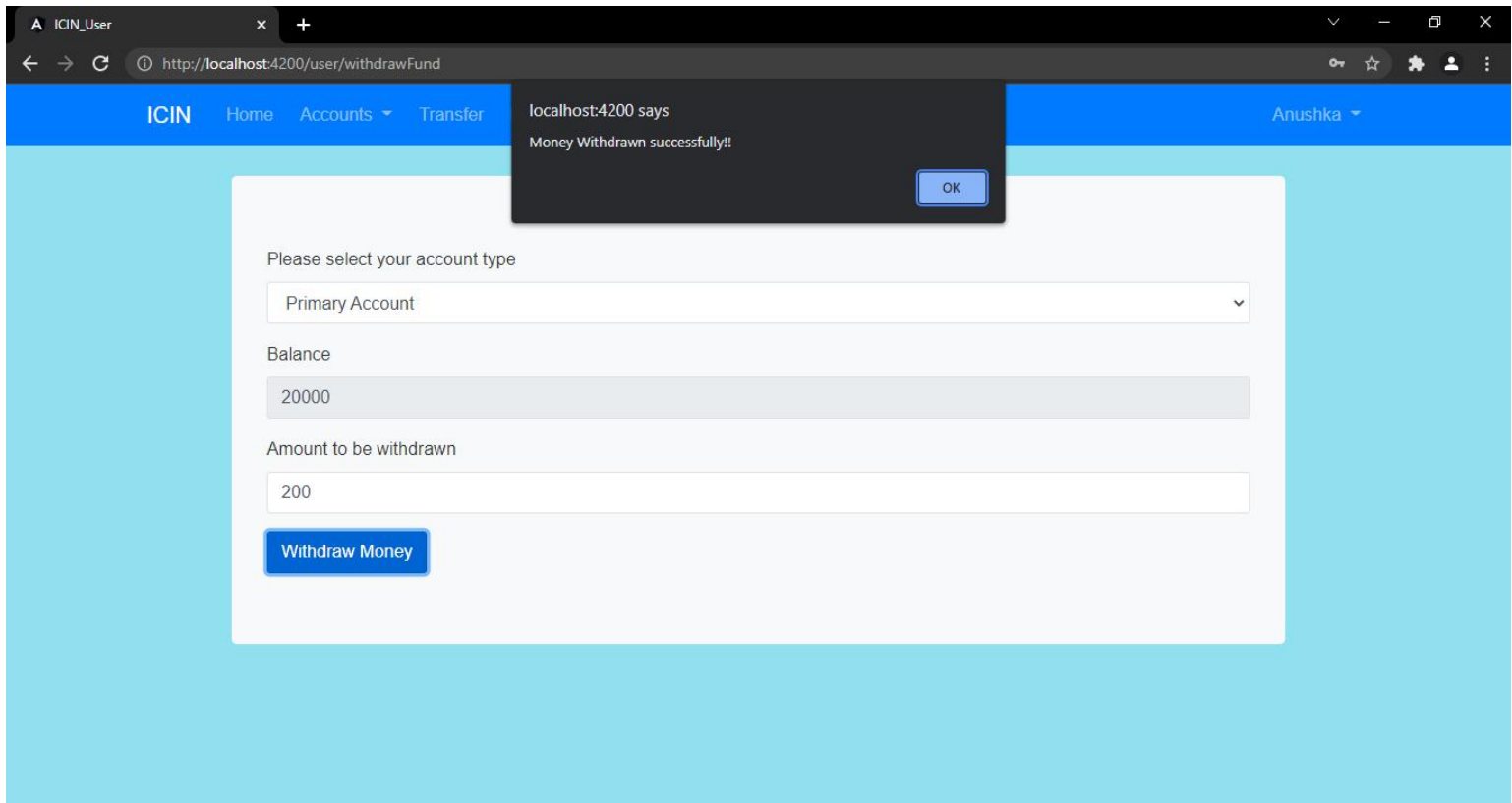
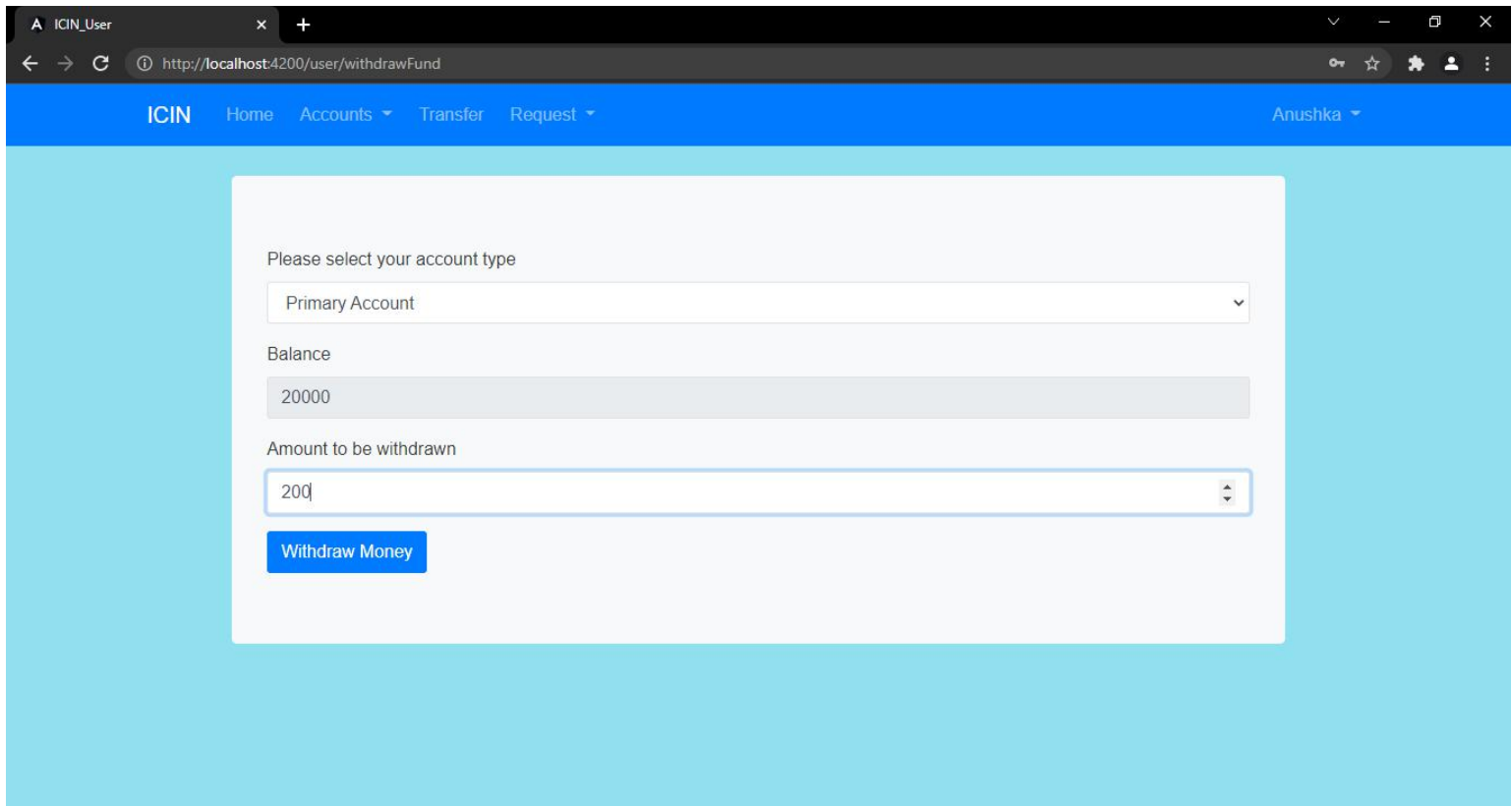
up

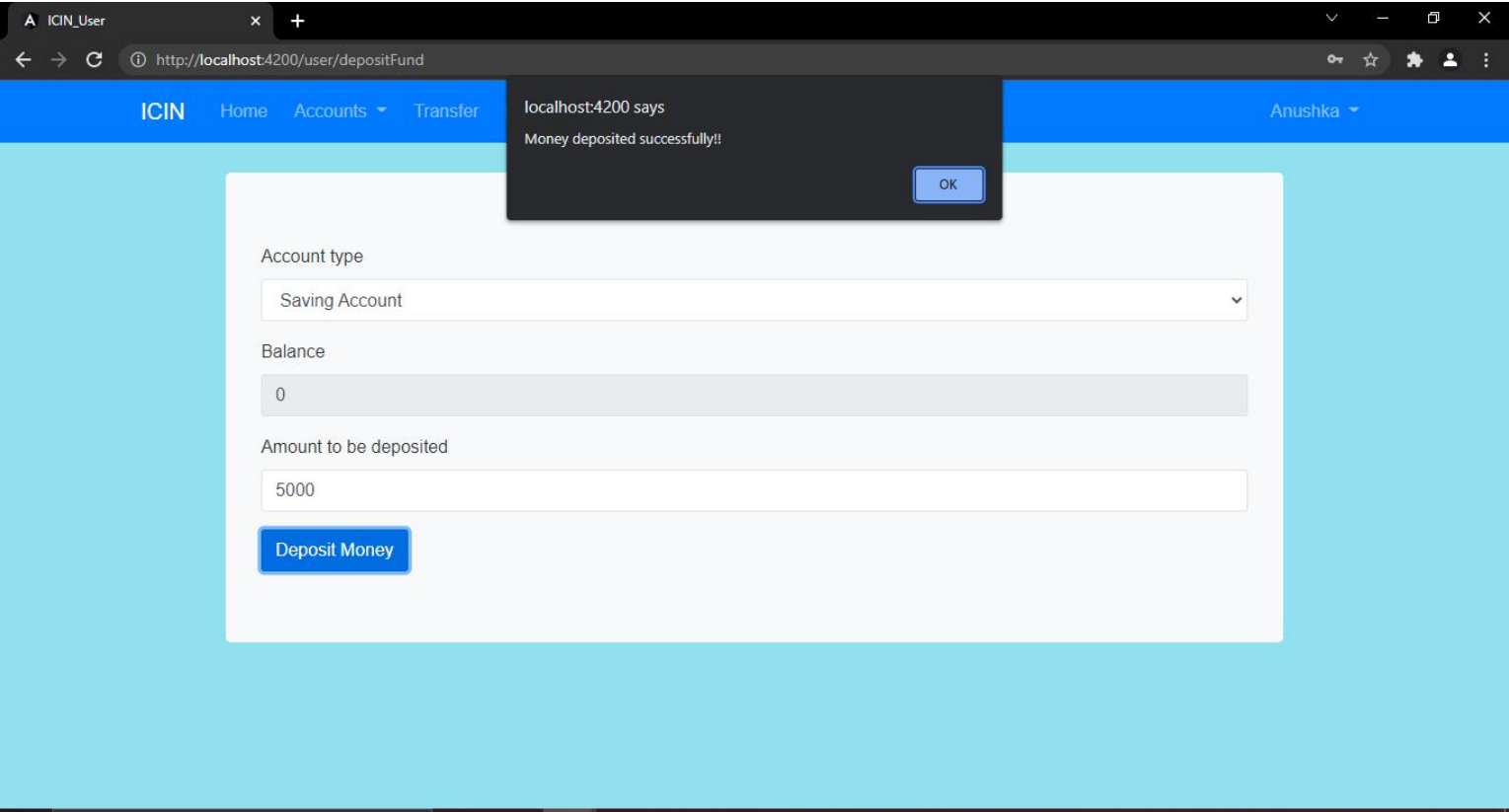
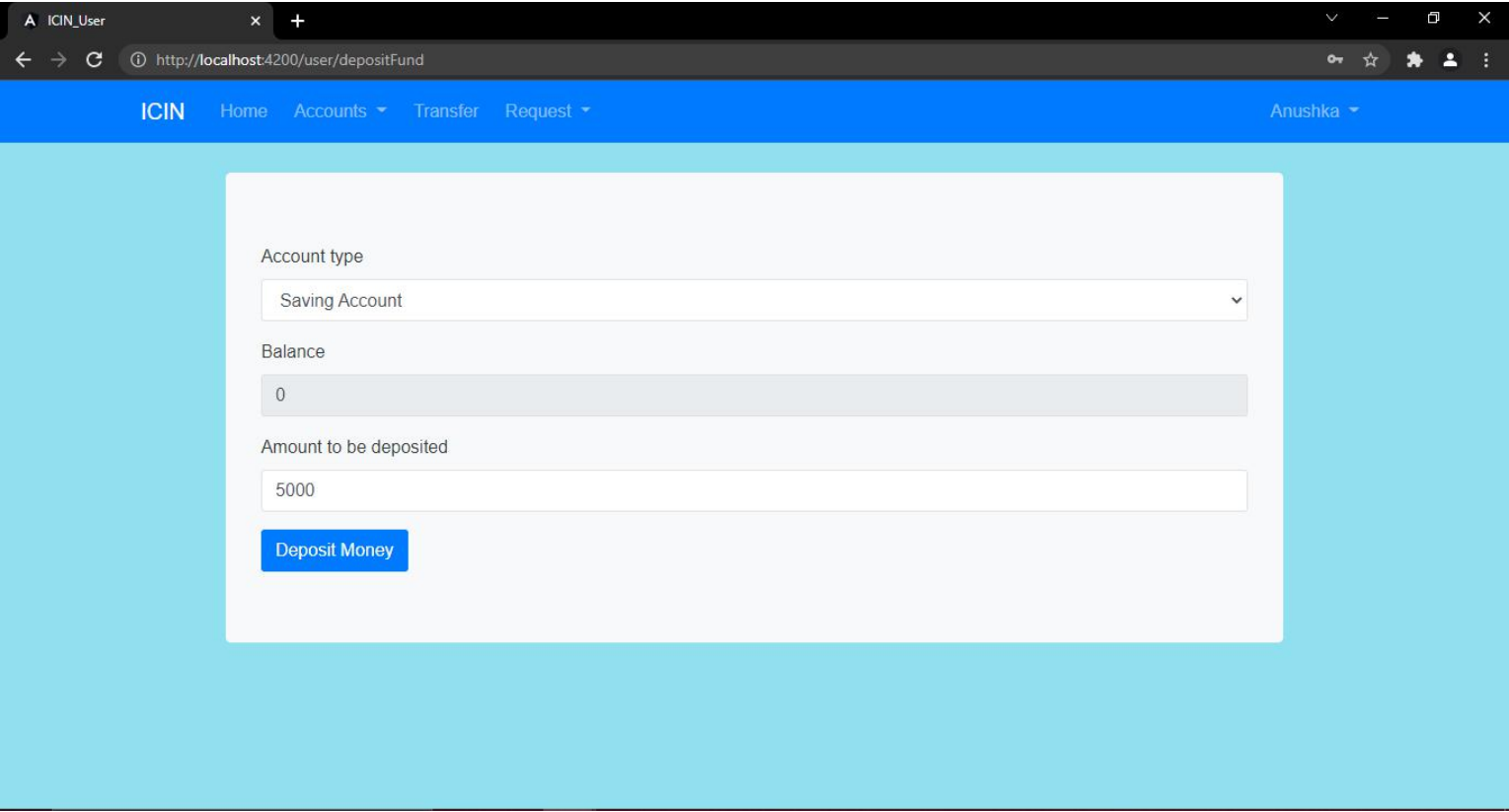
34343

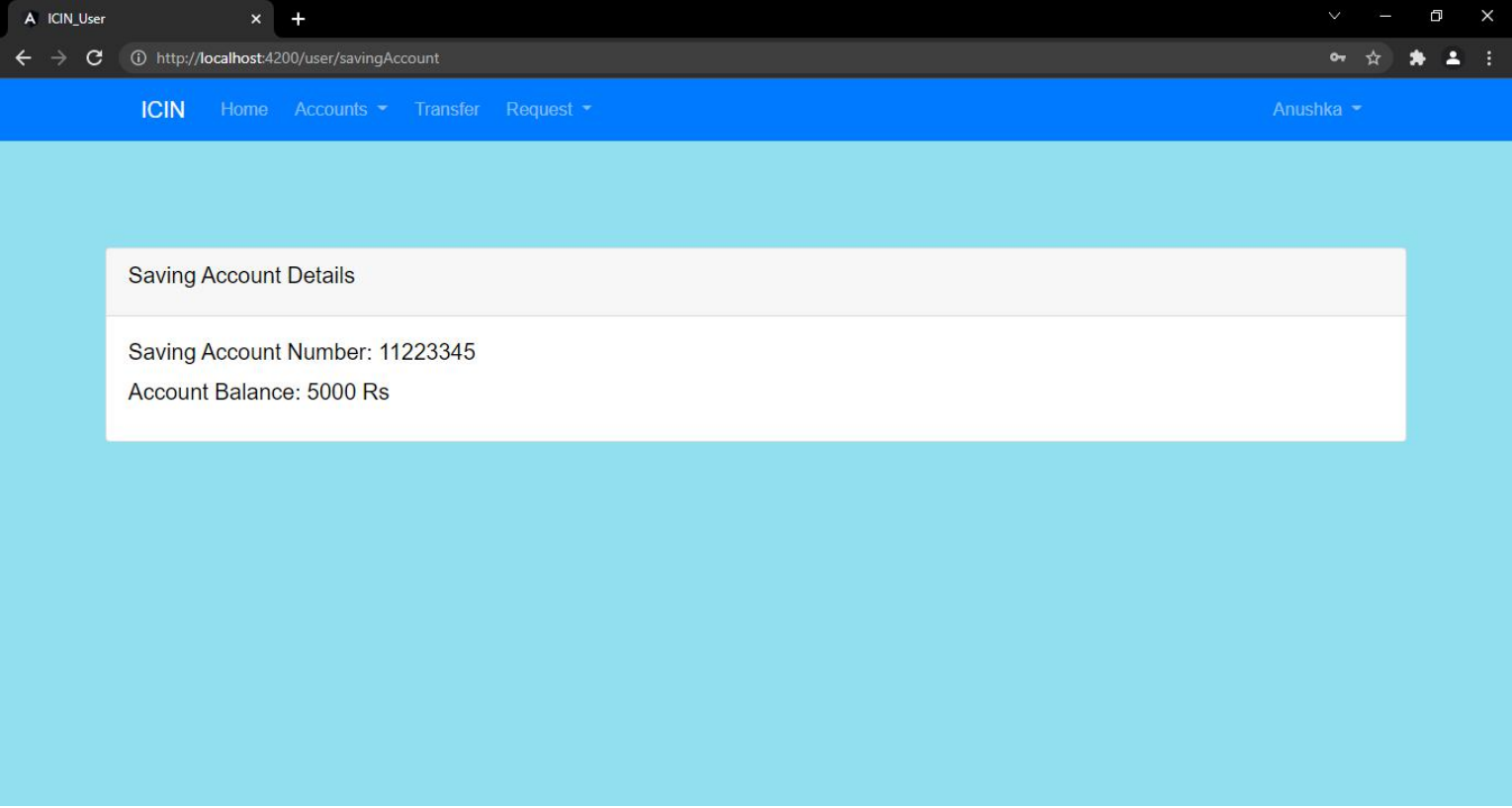
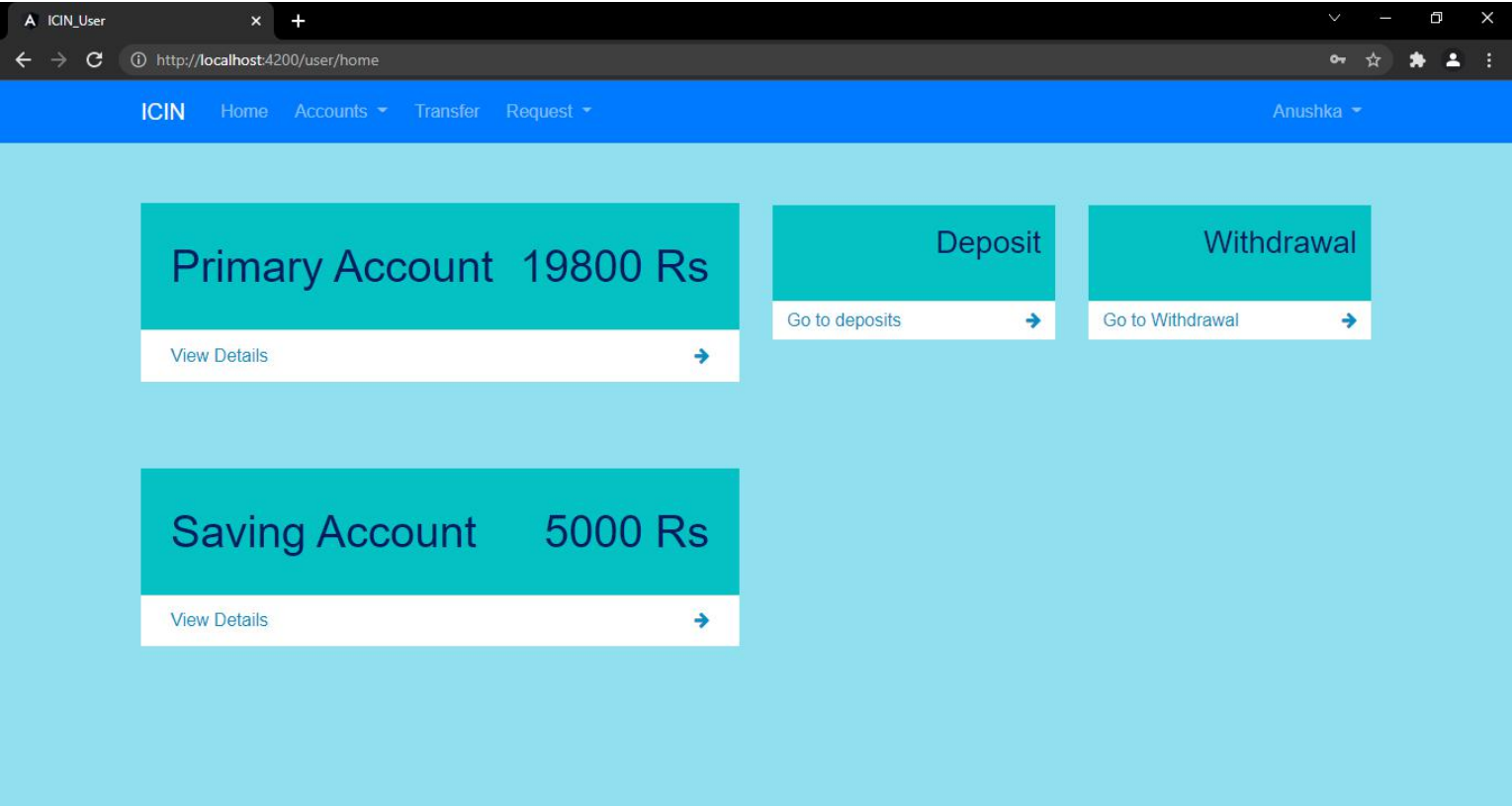
Next











ICIN_User x +
http://localhost:4200/user/transferFundRequest

ICIN Home Accounts Transfer Request Anushka

Account Type
Primary Account

Balance
19800

Beneficiary Name
SWH

Beneficiary's Account Number
ICIN2211

Beneficiary IFSC Code
ICIN332

Amount to be transferred
2000

ICIN_User x +
http://localhost:4200/user/transferFundRequest

Beneficiary Name
SWH

Beneficiary's Account Number
ICIN2211

Beneficiary IFSC Code
ICIN332

Amount to be transferred
2000

Transfer Type
IMPS

Optional Message

Transfer Funds

ICIN_User

+

http://localhost:4200/user/transferFundRequest

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Beneficiary Name

EWEW

Beneficiary's Account Number

22113345

Beneficiary IFSC Code

ICI

Amount to be transferred

23

Transfer Type

IMPS

Optional Message

Transfer Funds

localhost:4200 says

Transaction Successfull

OK

ICIN_User

+

http://localhost:4200/user/primaryAccount

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ICIN

Home

Accounts

Transfer

Request

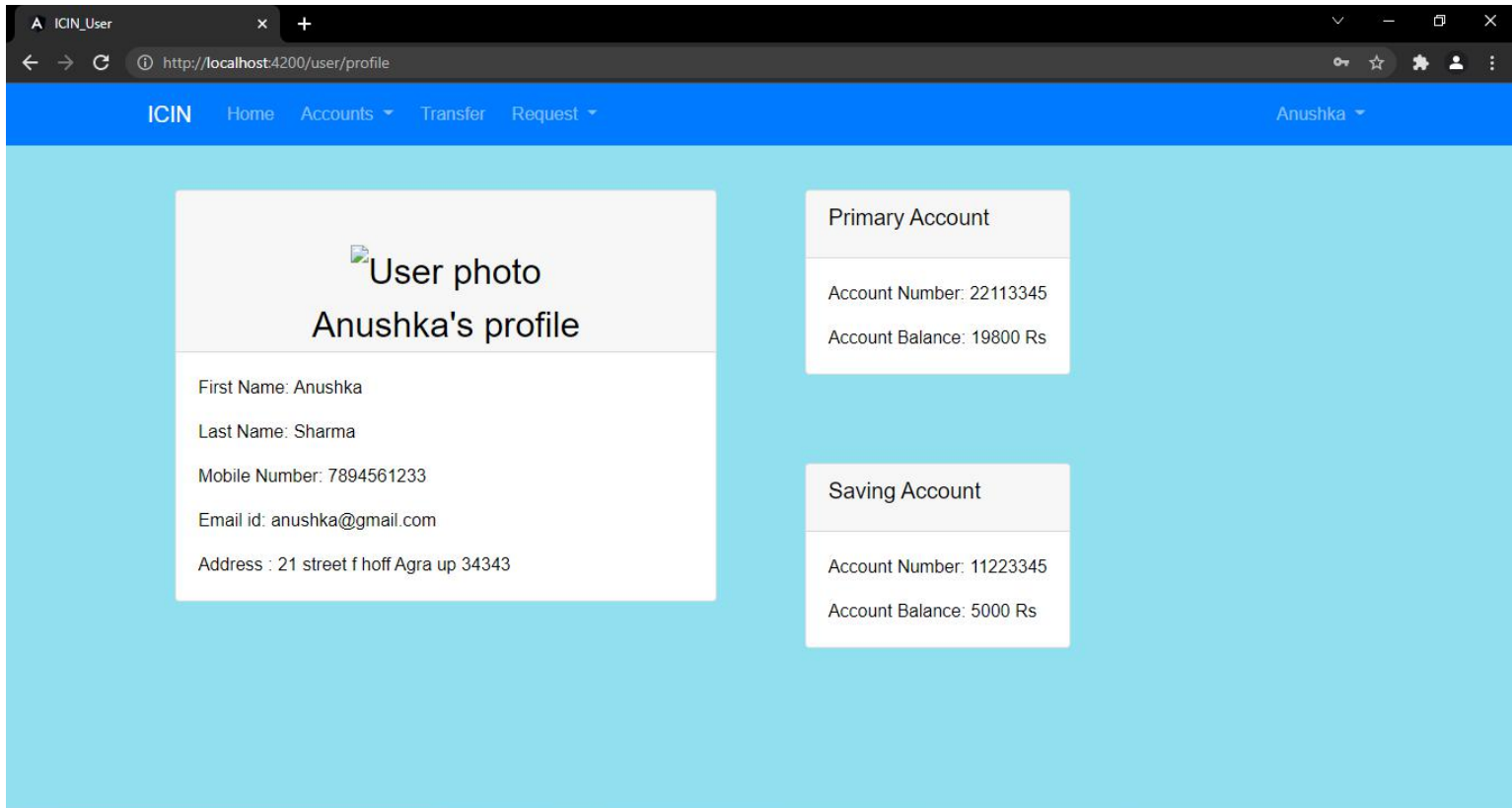
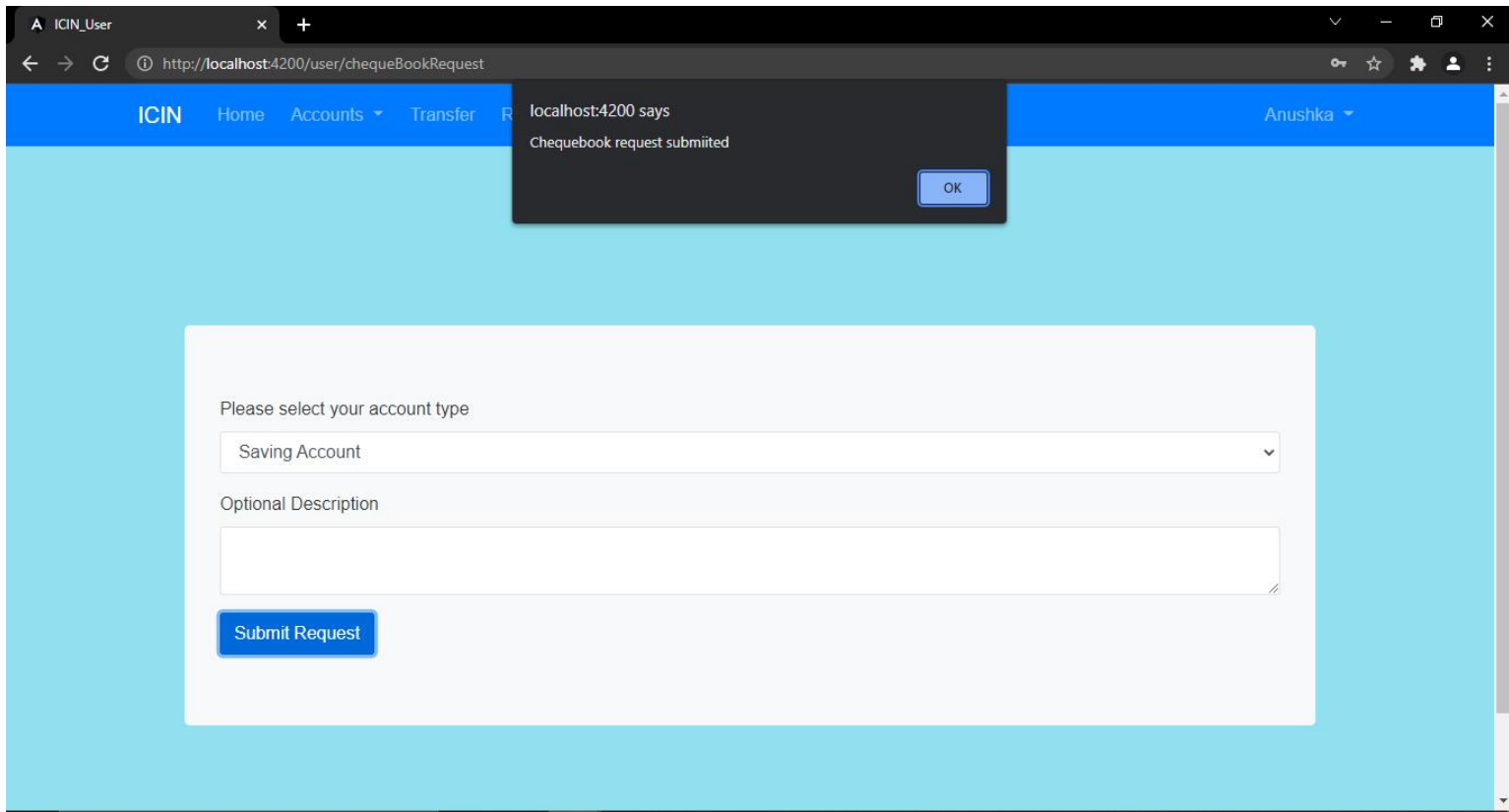
Anushka

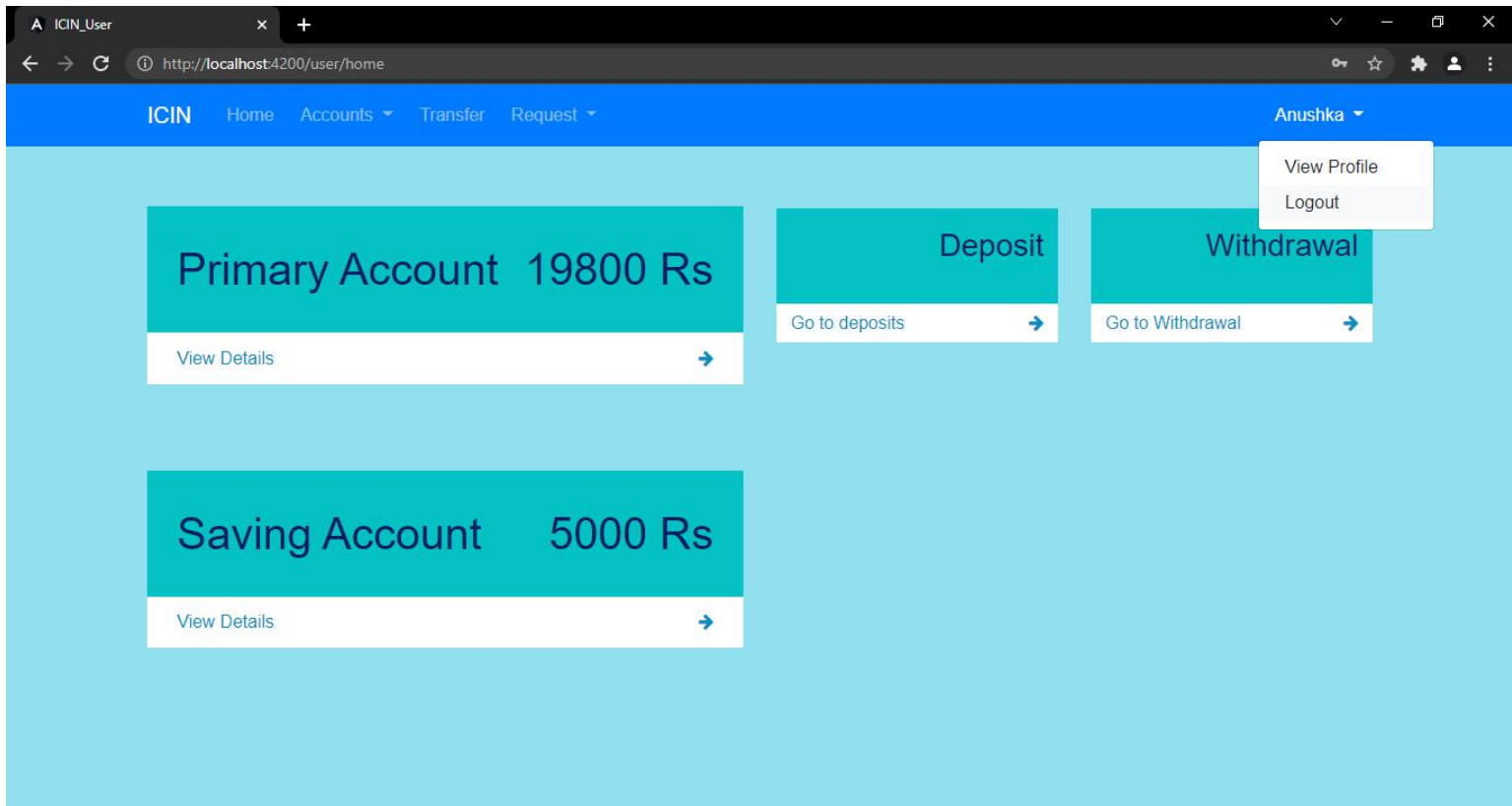
Primary Account: 22113345

Account Balance: 19800 Rs

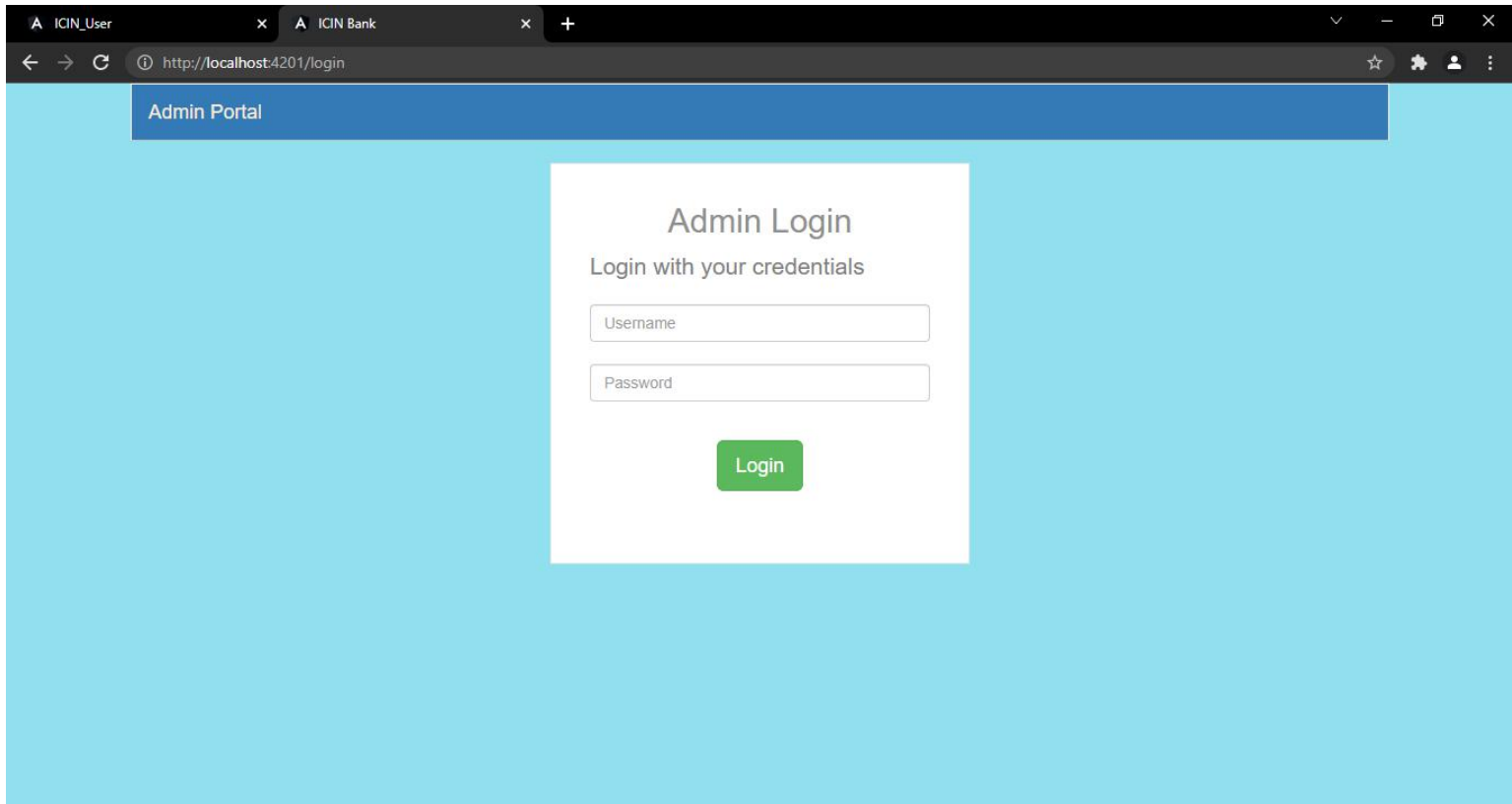
Recent Transactions

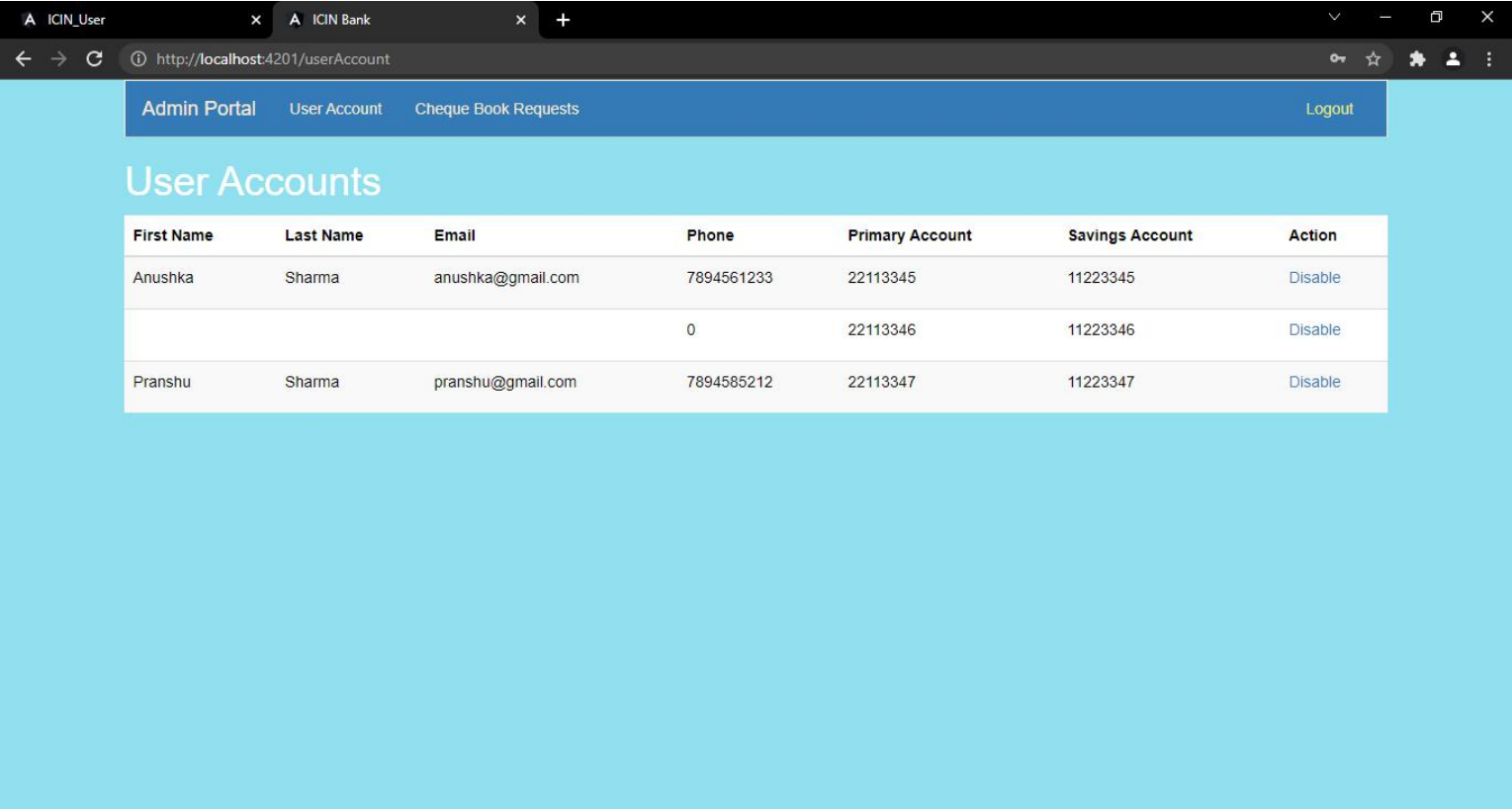
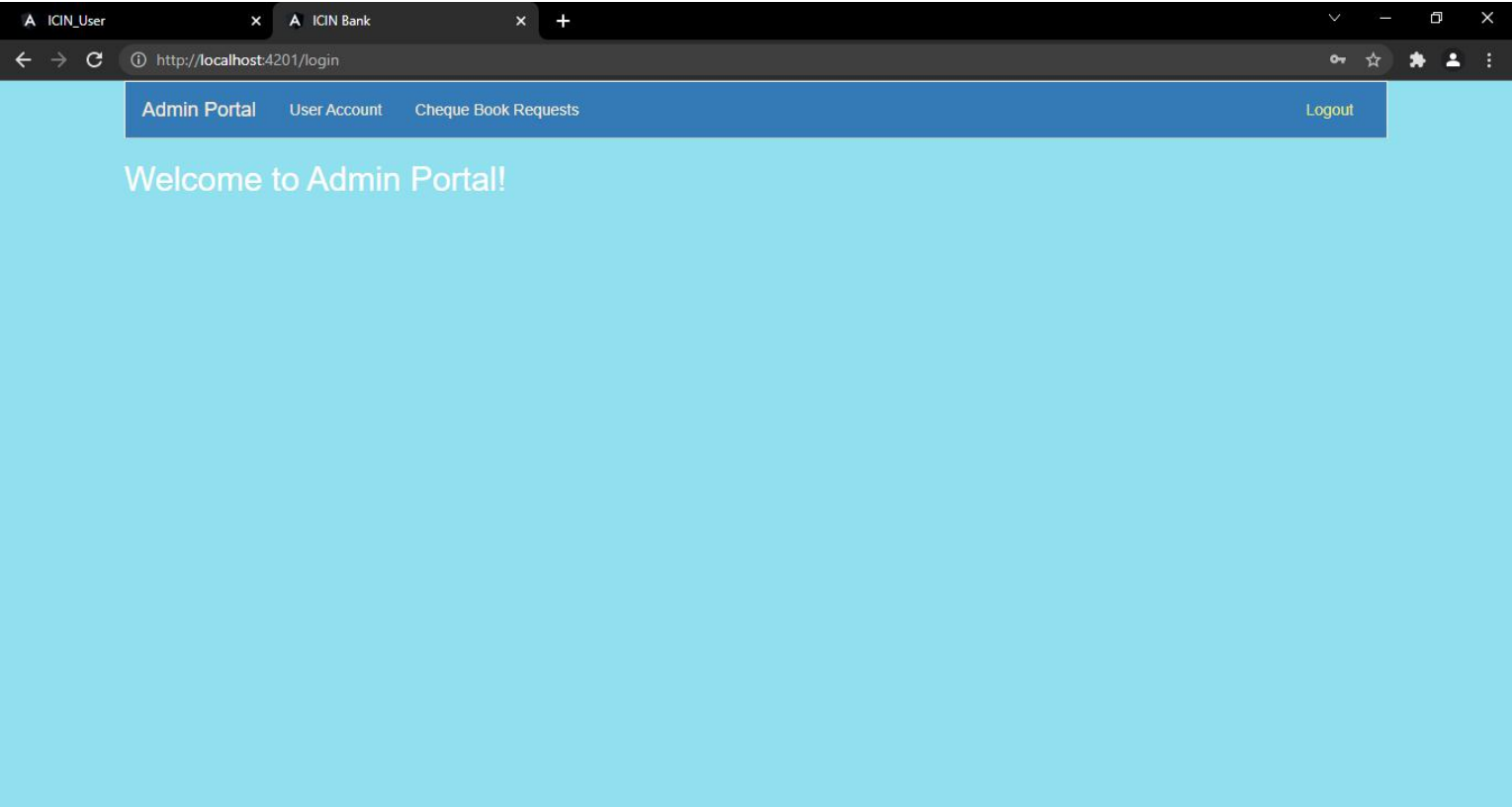
Transaction Id	Description	Benificiary's Account Number	Amount Transferred
1	Fund Transfer	22113345	23 Rs





✧ SCREENSHOTS OF ADMIN PORTAL





ICIN_User

ICIN Bank

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http://localhost:4201/chequeBookRequest

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Admin Portal

User Account

Cheque Book Requests

Logout

Cheque Book Requests

Request Id	User Name	Contact Number	Account Number	Confirmed?	Action
1	Anushka Sharma	7894561233	22113345	Pending	Confirm
2	Anushka Sharma	7894561233	22113345	Pending	Confirm

ICIN_User

ICIN Bank

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http://localhost:4201/chequeBookRequest

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Admin Portal

User Account

Cheque Book Requests

Logout

Cheque Book Requests

Request Id	User Name	Contact Number	Account Number	Confirmed?	Action
1	Anushka Sharma	7894561233	22113345	Confirmed	
2	Anushka Sharma	7894561233	22113345	Pending	Confirm

ICIN_User

ICIN Bank

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http://localhost:4201/chequeBookRequest

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Admin Portal

User Account

Cheque Book Requests

Logout

Cheque Book Requests

Request Id	User Name	Contact Number	Account Number	Confirmed?	Action
1	Anushka Sharma	7894561233	22113345	Confirmed	
2	Anushka Sharma	7894561233	22113345	Confirmed	

ICIN_User

ICIN Bank

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http://localhost:4201/chequeBookRequest

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Admin Portal

User Account

Cheque Book Requests

Logout

Cheque Book Requests

Request Id	User Name	Contact Number	Account Number	Confirmed?	Action
1	Anushka Sharma	7894561233	22113345	Confirmed	
2	Anushka Sharma	7894561233	22113345	Confirmed	

❖ SCREENSHOTS OF DATABASE

MySQL Workbench

Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

SQL File 5*

user

transactions

admin

cheque_book

Limit to 1000 rows

SQL Editor

```
1 • SELECT * FROM bnp.cheque_book;
```

Result Grid

Filter Rows:

id accepted user_id

1 1 1

2 1 1

NULL NULL NULL

cheque_book 1

Apply

Revert

MySQL Workbench

Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

SQL File 5*

user

transactions

admin

cheque_book

admin

personal_transaction

personal_transaction

Limit to 1000 rows

SQL Editor

```
1 • SELECT * FROM bnp.personal_transaction;
```

Result Grid

Filter Rows:

transaction_id acc_no acc_type date new_balance prev_balance transaction_type

1 22113345 Primary 2021-11-19 04:15:38 20000 0 Deposit

2 22113345 Primary 2021-11-19 04:16:57 19800 20000 Withdraw

3 11223345 Savings 2021-11-19 04:18:40 5000 0 Deposit

4 22113347 Primary 2021-11-19 04:37:18 332232 0 Deposit

5 22113347 Primary 2021-11-19 04:37:26 329000 332232 Withdraw

6 11223347 Savings 2021-11-19 04:37:47 32232 0 Deposit

NULL NULL NULL NULL NULL NULL NULL

l_transaction1

Apply

Revert

MySQL Workbench

Local instance MySQL80 x

File Edit View Query Database Server Tools Scripting Help

SQL File 5* user transactions admin cheque_book admin personal_transaction personal_transaction primary_account x

1 • `SELECT * FROM bnp.primary_account;`

Result Grid

	id	account_balance	account_number
▶	1	19800	22113345
	2	0	22113346
	3	329000	22113347
*	NULL	NULL	NULL

Apply Revert

MySQL Workbench

Local instance MySQL80 x

File Edit View Query Database Server Tools Scripting Help

SQL File 5* savings_account savings_account x

1 • `SELECT * FROM bnp.savings_account;`

Result Grid

	id	account_balance	account_number
▶	1	5000	11223345
	2	0	11223346
	3	32232	11223347
*	NULL	NULL	NULL

Apply Revert

MySQL Workbench

Local instance MySQL80 x

FileEditViewQueryDatabaseServerToolsScriptingHelp

SQL File 5*

savings_accountsavings_accounttransactions

Limit to 1000 rows

1 • `SELECT * FROM bnp.transactions;`

SCHEMAS

Filter objects

bnp

Tables

admincheque_bookpersonal_transactionprimary_accountsavings_accounttransactionsuser

ViewsStored Procedures

AdministrationSchemas

Information

Table: savings_account

Columns:

idbigint AI PK
account_balancebigint
account_numberint

Result Grid

Filter Rows:

Edit:Export/Import:Wrap Cell Content:

	transaction_id	ifsc	description	destination_accountnumber	source_accountnumber	transaction_amount
▶	1	ICN0001	Fund Transfer	22113345	22113345	23
▶	2	ICN0001	Fund Transfer	22113347	22113347	3243
*	NULL	NULL	NULL	NULL	NULL	NULL

Result GridForm EditorField TypesQuery Stats

Object InfoSessiontransactions 1 xApplyRevert

MySQL Workbench

Local instance MySQL80 x

FileEditViewQueryDatabaseServerToolsScriptingHelp

SQL File 5*

savings_accountsavings_accounttransactionstransactionsuser

Limit to 1000 rows

1 • `SELECT * FROM bnp.user;`

SCHEMAS

Filter objects

bnp

Tables

admincheque_bookpersonal_transactionprimary_accountsavings_accounttransactionsuser

ViewsStored Procedures

AdministrationSchemas

Information

Table: savings_account

Columns:

idbigint AI PK
account_balancebigint
account_numberint

Result Grid

Filter Rows:

Edit:Export/Import:Wrap Cell Content:

	id	address	fullname	mailid	password	phonenumber	surname	primary_account_id	savings_account_id
▶	1	21 street f hoff Agra up 34343	Anushka	anushka@gmail.com	791bd01b5c514eb4ae538b1802a28d84	7894561233	Sharma	1	1
▶	3	23 err gridg aligarh up 3353	Pranshu	pranshu@gmail.com	f68fe98a33c7330a08711e1e2c6e048c	7894585212	Sharma	3	3
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

Result GridForm EditorField TypesQuery Stats

Object InfoSessionuser 1 xApplyRevert